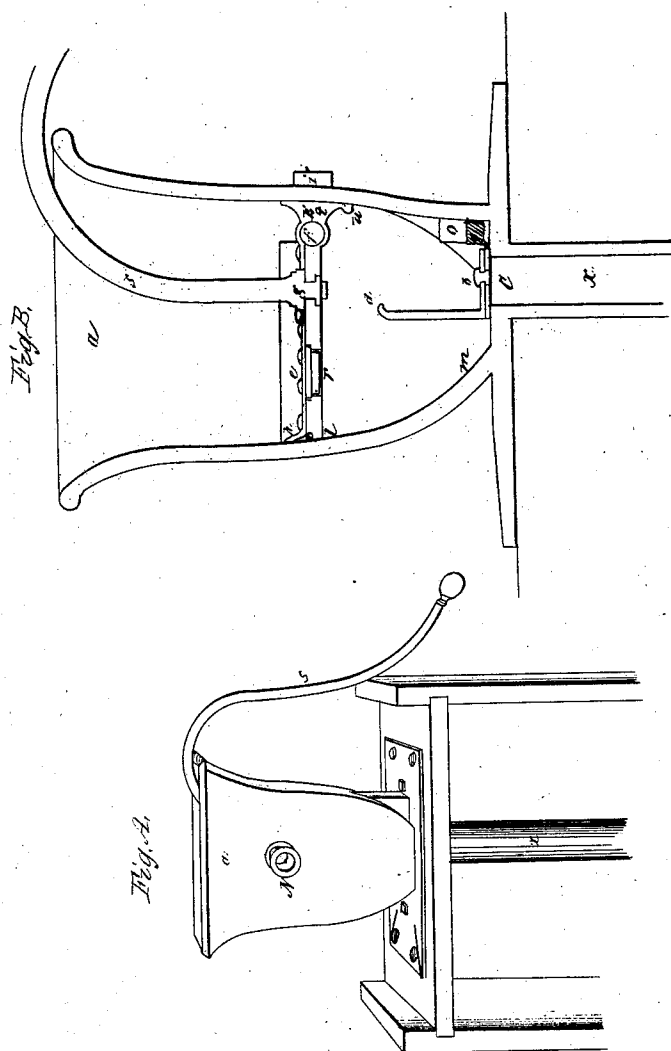


J. Reed,
Pump Lift,
No 853, *Patented July 24, 1838.*



UNITED STATES PATENT OFFICE.

JESSE REED, OF MARSHFIELD, MASSACHUSETTS.

PUMP.

Specification of Letters Patent No. 853, dated July 24, 1838.

To all whom it may concern:

Be it known that I, JESSE REED, of Marshfield, in the county of Plymouth and Commonwealth of Massachusetts, machinist, have invented, constructed, made, and applied to use a new and useful Improvement in the Construction of Pumps, the annexed drawings of which herein referred to, together with the following description, form my specification.

The improvements I contemplate require a substitution of parts not ordinarily employed in working pumps, and a different arrangement of those that are. I dispense with the boxes in common use that contain the valves and also with the piston rod, and instead of them I employ and use a movable valve plate with parts adapted to its application.

To distinguish this pump from others in use I shall designate it by the name of "The Franklin Pump."

Although other forms than the one I have adopted will answer, yet I prefer the one hereinafter described.

Figure A and Fig. B of the accompanying drawing represent my improvement, the first being a side view and the second a cross section. The body of the pump *a*, Figs. A, B, is about twelve inches long, nine inches wide one way, and six inches the other, or may be of other suitable dimensions. It may be made of wood although metal is much preferable. The top end is open and a little flaring. The interior surface *l, m*, Fig. B, should be made smooth against which the edge of the valve plate rubs. Through the bottom is an aperture C, Fig. B, to admit the water, over which I place the lower valve *b* and secure it in place by means of a leather hinge *n*, and an oblong block of wood *c* reposing on the bottom, and at one side of the pump, which I call the side-piece and which is kept in place by a wedge *o*. An arm *d*, about two inches long, either perpendicular or oblique, projects from the upper surface of this valve, by means of which the valve may be opened to let off the water to prevent its freezing in severe weather; but having described this in a former specification I do not now claim it as being new.

N, Fig. A, represents the nose of the pump. The valve plate D, is stationed

within the pump. Its thickness is about a quarter of an inch. Its length and width correspond on three sides with the interior circumference of the pump and the other side or edge in conjunction with the shelf E described below forms the hinge on which it works. To facilitate the packing which is by means of a strip of leather, one edge a little elevated, I cast around the sides or edges of said plate an angular lip P, or elevation three eighths of an inch high, to which I rivet or otherwise fasten the leather *z*. Near its center is an aperture *r* to admit the water as the brake *s* is raised. Upon the upper surface directly over said aperture *r* I place the upper valve *e*, which also is kept in place by a leather hinge attached at one end to said plate. The hinge E of the valve plate is constructed as follows, viz: At one side of said pump within, about three inches from the bottom, I fix a horizontal shelf *t*, about two inches wide with a semi circular channel or groove on its projecting edge, and on one edge of the valve plate I cast a cylindrical arbor *f* of like diameter with that of the groove on the edge of the shelf, and being suitably fitted together the former within the latter a correct movement against any liability to looseness by wear is preserved, and a strong durable hinge within the pump is formed. The shelf is fastened to the side of the pump by a screw *i'* through the pump and as an additional support to the shelf I cast two knobs *u* upon the inside of the pump just beneath the hinge. The pump brake *s* is so bent as to admit of putting one end into the top of the pump so as to reach the valve plate D, to which it is firmly screwed, and when its outer end is elevated, the valve plate descends turning on its hinge and the valve on its upper surface rises. When the front edge of the valve plate rubs against the side of the pump a slight curve is made in the latter, corresponding with the sweep of the former, to give to the plate an easy motion and effect. The water from the fountain is conducted to the pump through a pipe *x*, Figs. A, B. I give preference to a lead pipe, one end of which is to be attached to the pump in any convenient manner.

The facility with which both valves may be taken out, cleaned and replaced when

necessary, makes it valuable for vessels' use at sea.

The characteristic improvements embodied in my pump and which I claim as my invention are—

1. The arrangement or combination of the parts to operate substantially as above described.

2. The manner I have described of using and fixing my lower valve upon the bottom of the pump to a side piece, and also the movable valve plate swinging upon its hinge and connected with the brake without any

intervening part and in lieu of the common box and piston rod.

In testimony that the foregoing, together with the drawings hereto referred to, is a true specification of my said improvements, I do hereunto set my hand this sixteenth day of June in the year of our Lord Eighteen hundred and thirty eight.

JESSE REED. [L. s.]

Witnesses:

R. H. EDDY,
GEO. ODSORM.